Notebook Computer

Intel Pentium II processor, high-speed AGP graphics with 3D, maximum 384MB SDRAM, up to 15.0" XGA TFT screen. Can support DVD-ROM, 2nd HDD, 2nd battery, LS-120 and ZIP drive.

USER MANUAL

NOTICE

Specifications and information found in this manual are subject to change **without** notice. Any changes therefore will be incorporated in future editions. The manufacturer assumes **no** responsibility for errors or omissions in this document.

TRADEMARKS

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Pentium, Tillamook and MMX are trademarks of *Intel Semiconductor*

Other trademarks are property of their respective owners.

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Revision : 1

SAFETY INSTRUCTIONS

1. Please read these safety instructions carefully.
2. Please keep this User's Manual for later reference.
3. Please disconnect this equipment from AC outlet before cleaning.

   Don't use liquid or sprayed detergent for cleaning.

   Use moisture sheet or cloth for cleaning.
4. For pluggable equipment, the socket-outlet shall be installed near the equipment and shall be easily accessible.
5. Please keep this equipment from humidity.
6. Lay this equipment on a reliable surface when install. A drop or fall could cause injury.
7. The openings on the enclosure are for air convection hence protects the equipment from overheating. DO NOT COVER THE OPENINGS. We recommend you to use the rear feet whenever possible, this not only improves the ergonomics when you type it also helps to cool the notebook down. Don't use your notebook on a soft surface, like a bed since this would cover the ventilation holes in the bottom of the notebook.
8. Make sure the voltage of the power source when connect the equipment to the power outlet.
9. Place the power cord such a way that people can not step on it. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for long time, disconnect the equipment from mains to avoid being damaged by transient overvoltage.
12. Never pour any liquid into opening, this could cause fire or electrical shock.
13. Never open the equipment. For safety reason, the equipment should only be opened by qualified service personnel.

14. If one of the following situations arises, get the equipment checked by a service personnel:
    a. The power cord or plug is damaged.
    b. Liquid has penetrated into the equipment.
    c. The equipment has been exposed to moisture.
    d. The equipment does not work well or you can not get it work according to user's manual.
    e. The equipment has dropped and damaged.
    f. If the equipment has obvious sign of breakage.

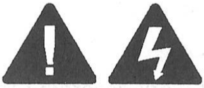
15. DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT UNCONDITIONED, STORAGE TEMPERATURE BELOW 20°C (-4°F) OR ABOVE 60°C (140°F), IT MAY DAMAGE THE EQUIPMENT.

16. For battery safety, read battery chapter 5.11.

17. For Fax Modem safety read Appendix C.

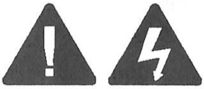
Safety Notices

To comply with Canadian and U.S. laws, the safety information is provided in English and French.



Caution: To reduce the risk of an electric shock, which could cause personal injury, follow all safety notices. The symbols shown are used in your documentation and on your equipment to indicate safety hazards.

Attention: Afin de prévenir les risques d'électrocution, respectez toutes les consignes de sécurité. Les symboles figurant dans la documentation et sur l'appareil indiquent les points dangereux.



Warning: Lithium batteries can be dangerous. Improper handling or installation of lithium batteries may result in an explosion. Replace them only with an exact replacement. Dispose of lithium batteries by returning them to your dealer.

Avertissement Les batteries lithium présentent certains risques. Une mauvaise manipulation ou installation peut provoquer une explosion des batteries. N'utilisez que ce type de batteries. Rapportez les batteries usées chez votre revendeur.

IT System Connectors: This equipment has not been designed for connection to all IT power systems; a modification may be required. Contact your dealer or local electrical authority.

Connecteurs système IT Cet appareil n'a pas été conçu pour être connecté à tous les systèmes d'alimentation IT et si vous avez besoin d'y apporter une modification, adressez-vous à votre revendeur ou à un électricien.

Safety Notices for All Users

This equipment has a 3-wire power cord. Replace the power cord if it gets damaged. Contact your dealer for an exact replacement.

In the U.S.A. and Canada, the power cord must be a UL-listed detachable power cord (in Canada, CSA-certified), type SVT or SJT, 18 AWG, 3-conductor, provided with a molded-on NEMA type 5-15 P plug cap at one end and a molded-on cord connector body at the other end. The cord length must not exceed 3 meters.

Outside the U.S.A. and Canada, the plug must be rated for 250 VAC, 2.5 amp minimum, and must display an international agency approval marking. The cord must be suitable for use in the end-user country. Consult your dealer or the local electrical authorities if you are unsure of the type of power cord to use in your country. Voltage changes occur automatically in the power supply.

Consignes de sécurité

Cet équipment possède un cordon d'alimentation à trois fils. Si le cordon d'alimentation venait à être abîmé, avant de le remplacer, consultez votre revendeur.

Aux Etats-Unis et au Canada, le cordon d'alimentation doit être détachable, homologué UL (Certifié CSA pour le Canada), de type SVT or SJT, 18 AWG, à 3 fils, fourni avec prise surmoulée NEMA de type 5-15P à une extrémité et un cordon de raccordement surmoulé à la masse à l'autre extrémité. La longueur du cordon ne doit pas dépasser 3 mètres.

Hors des Etats-Unis et du Canada, la prise doit être conforme pour 250 V, 2.5 A minimum; la marque d'homologation d'un organisme international doit également figurer sur la prise. Le cordon d'alimentation doit être conforme aux normes du pays de l'utilisateur final. Si vous ne savez pas quel type de cordon utiliser, adressez-vous à votre revendeur ou à un électricien. Le changement de voltage survient automatiquement dans l'alimentation.

Warning: Under no circumstances should the user attempt to disassemble the power supply. The power supply has no user-replaceable parts. Inside the power supply are hazardous voltages that can cause serious personal injury. A defective power supply must be returned to your dealer.

Attention: Ne tentez jamais de démonter le bloc d'alimentation. Vous n'êtes pas qualifié pour en remplacer les éléments, et vous risqueriez de vous électrocuter en touchant l'une de ses zones à haute tension. S'il est défectueux, vous devrez le rapporter chez votre revendeur.

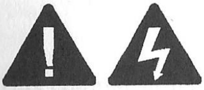
Safety Notices for Users Outside of the U.S.A. and Canada

PELV (Protected Extra-Low Voltage) Integrity To ensure the extra-low voltage integrity of the equipment, connect only equipment with mains-protected electrically compatible circuits to the external ports.

Remote Earths To prevent electrical shock, connect all local (individual office) computers and computer support equipment to the same electrical circuit of the building wiring. If you are unsure, check the building wiring to avoid remote earth conditions.

Earth Bonding For safe operation, only connect the equipment to a building supply that is in accordance with current wiring regulations in your country. In the U.K., those regulations are the IEE.

Laser Compliance Statement for CD-ROM, DVD-ROM and LS-120 Drives



The CD-ROM, DVD-ROM and LS-120 drive in this notebook computer is a laser product. The classification label of the drive is located on top of the drive. Below is a sample of the classification label;

CLASS 1 LASER PRODUCT

LASER KLASSE 1

LUOKAN 1 LASERLAITE

APPAREIL A LASER DE CLASSE 1

KLASS 1 LASER APPARAT

The drive is certified in the USA to comply with the requirements of the Department of Health and Human Services 21 Code of Federal Regulations (DHHS 21 CFR) Subchapter J. for Class 1 laser products.

In other countries the drive is certified to comply with the requirements of EN60825.

Caution: Do not open the drive. There are no user-serviceable parts or components inside. Use of controls, adjustments and operation of procedures other than those specified, may result in hazardous exposure to radiation. Class I (1) laser products are not considered hazardous. The drive has an internal, Class I (1), 0.5-milliwatt, aluminum gallium-arsenide laser that operates at a wavelength of 760 to 810 nanometers. The design of the laser system and the drive ensures that there is no exposure to laser radiation above a Class I (1) level during normal operation, user maintenance or servicing conditions.

Conventions

The following conventions are adopted throughout this manual:

- **Notebook** in **boldface** (with or without capitalization) refers to the **notebook** computer, which you have purchased.
- **Boldface** type is also used to highlight **important information** in this document.
- The messages, which appear on the notebook screen, will be boxed when they are mentioned.
- Whenever extra caution is called for, the information will be boxed in a darker frame preceded by "**Note:**" or "**Warning:**"

FCC NOTICE

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limitations are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult dealer or a Radio/TV technician for help.

Use only shielded I/O cables to connect I/O devices to this equipment.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

INFORMATION TO BE SUPPLIED TO THE USERS

We confirm that the following information will be supplied to the users of this equipment. This information will be provided with the user's manual.

FCC REQUIREMENTS

This equipment complies with Part 68 of the FCC rules. On the bottom of this equipment is the label that contains, among other information, the FCC Registration Number and Ringer Equivalence Number (REN) for this equipment. IF REQUESTED, THIS INFORMATION MUST BE GIVEN TO THE TELEPHONE COMPANY.

The REN is useful to determine the quantity of devices you may connect to your telephone line and still have all of those devices ring when your telephone number is called. In most, but not all areas, the sum of the REN's of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices you may connect to your line, as determined by the REN, you should contact your local telephone company to determine the maximum REN for your calling area. If your telephone equipment cause harm to the telephone network, the telephone company may disconnect your service temporarily. If possible, they will notify you in advance. But if advance notice isn't practical, you will be informed of your right to file a complaint with the FCC.

Your telephone company may change in its facilities, equipment, operations or procedures that could affect the proper functioning of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

The telephone company may ask that you disconnect this equipment from the network until the problem has been corrected or until you are sure that the equipment is not malfunctioning. This equipment may not be used on coin service provided by the telephone company. Connection to party lines is subjected to state tariffs.

NOTICE

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or their electronic device to send any message via a telephone facsimile machine unless such message clearly contains in a margin at the top or bottom of each transmitted page or on the first page of the transmission the following information:

(1) the date and time of transmission

(2) identification of either business, business entity or individual sending the message; and

(3) telephone number of either the sending machine, business entity or individual.

In order to program this information into your fax/modem, please refer to the appropriate instructions in your fax/modem manual.

Canadian EMI Compliance Statement

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Avis de conformit aux normes du EMI du Canada

Cet appareil numérique de la classe B respecte toutes les exigences du Reglement sur le matériel brouilieur du Canada.

European Union CE Marking Declaration

This product has been tested and found to comply with the EMC requirements subject to the EU directive for CE marking.

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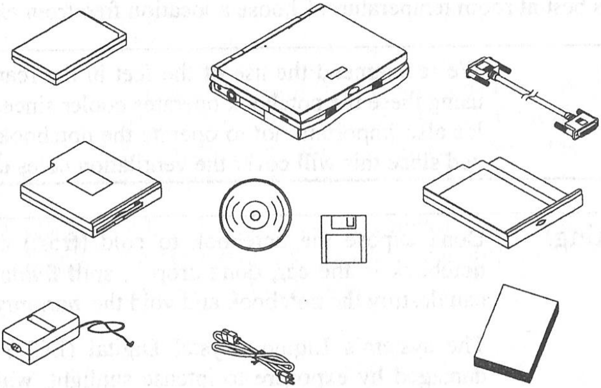
Chapter 1 Introduction

Thank you for buying this unique notebook, we are sure it will bring you lots of use and convenience either at office or on the road.

1.1 Unpacking and setting up

Notebook
External FDD cable
CD-ROM drivers
CD utilities
AC-adapter
Power cable
2nd Battery cover
User Manual
Main battery
Floppy Diskette



Please make sure that you have all the above items, if not call the place where you bought the notebook and inform them. Some of the items might be installed in your notebook already.

If you need to send your notebook for service or upgrade it's recommended to use the packing box, so save it for the future.

1.2 Accessories

There are many standard notebook accessories available for notebook computers that can enhance the use of your notebook. Some accessories are proprietary and can only be used with your notebook, these accessories are described in Chapter 8.

1.3 Operating environment

Care should be taken when traveling with or using the system when mobile. When selecting a suitable working location, please consider the ventilation, temperature, dust and dirt, and electromagnetic and RF interference.

The selected location should provide a sturdy and reasonably level surface with at least four inches of open space around the computer cabinet for proper airflow. Your computer functions best at room temperature. Choose a location free from extreme heat or cold.

Note: We recommend the use of the feet in the rear of the notebook, when using these the notebook operates cooler since the ventilation is better. It's also important not to operate the notebook on soft surfaces, like a bed since this will cover the ventilation holes of the notebook.

Warning: Don't expose the notebook to cold (frost) or heat, don't leave the notebook in the car, don't drop it, spill fluids or open the case. This can destroy the notebook and void the warranty.

The system's Liquid Crystal Digital (LCD) video display may be damaged by exposure to intense sunlight, which builds up excessive heat inside the display enclosure. Only exposure to indirect or subdued sunlight is recommended.

1.4 Fans

There is one fan on the left side of the notebook, it will turn on when the CPU temperature exceeds 60 degrees. The fan will turn off when the CPU temperature is below 50 degrees.

Warning: If the temperature continues to rise above the CPU allowable limit, either due to defect fan or the notebook is operated in a too hot environment or a soft surface that covers the ventilation holes. Then the notebook will enter Save-to-disk mode (S2D). If there is no PHDISK partition (see Chapter 3) the notebook will shutdown and your data will be lost.

Chapter 2 Before you begin

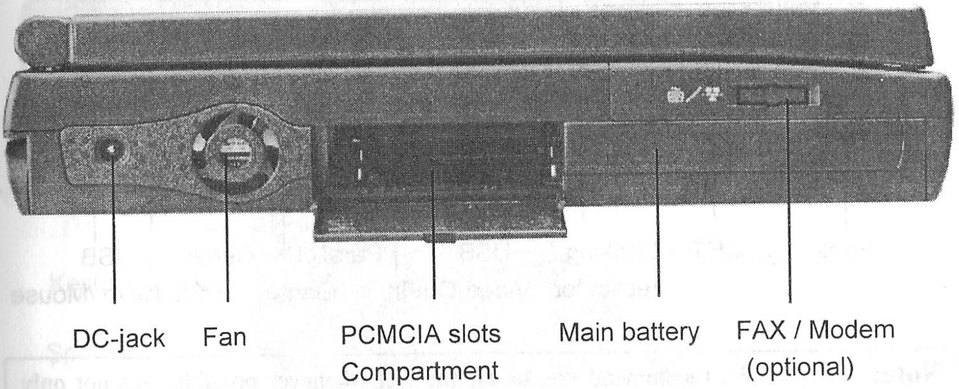
2.1 Front view

Gently press the release button on front of the notebook and raise the display until it is at a comfortable viewing angle.

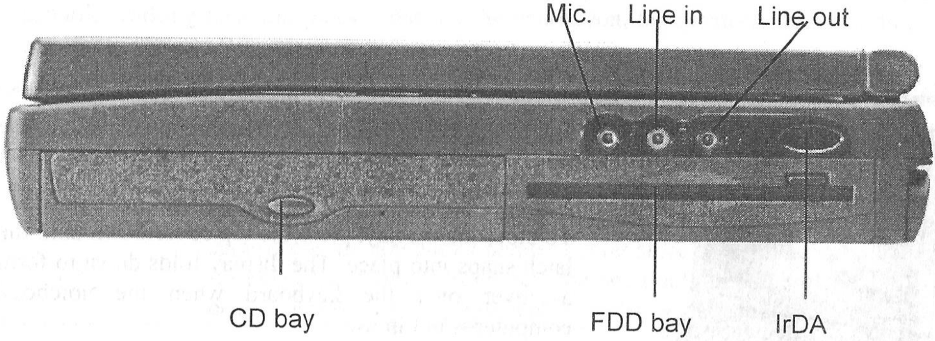
To close the display, press the top cover down until the latch snaps into place. The display folds down to form a cover over the keyboard when the notebook computer is not in use.

When you close the notebook make sure that there are no items on the keyboard or palmrest since these might damage the LCD panel.

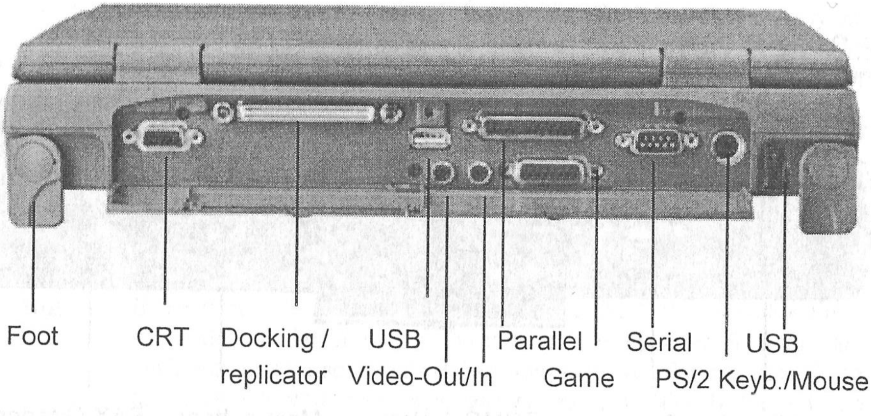
2.2 Left view



2.3 Right view

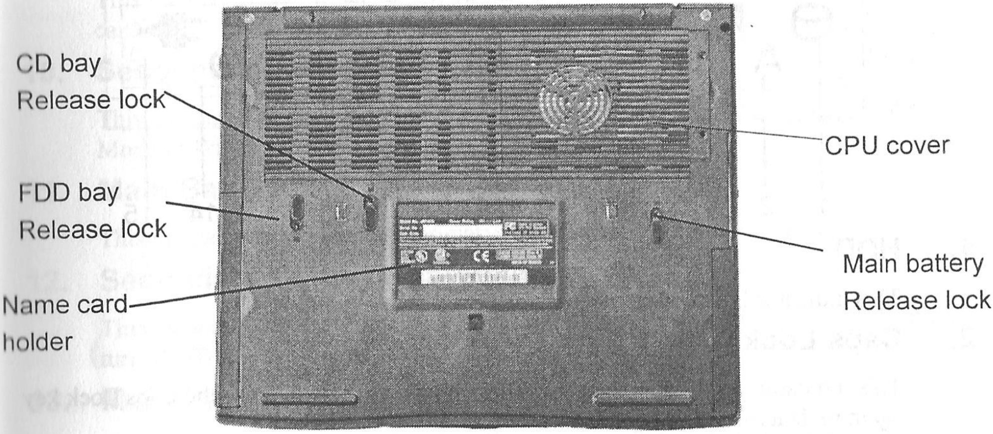


2.4 Rear view

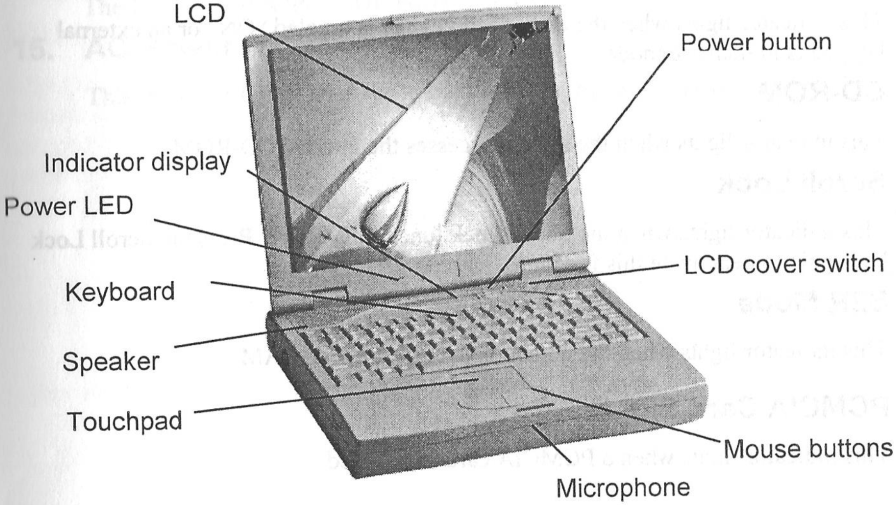


Note:	We recommend you to use the feet whenever possible, this not only improves the ergonomics when you type it also helps to cool the notebook down.

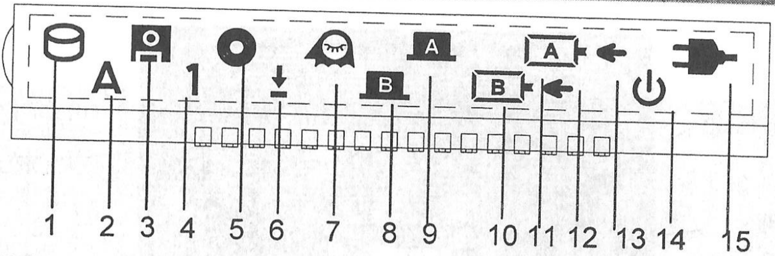
2.5 Bottom view



2.6 Interior features



2.7 System Status display indicators



1. HDD

This indicator lights when the system accesses the internal HDD .

2. Caps Lock

This indicator lights when the Caps Lock function is active. Press the Caps Lock key again to deactivate this function.

3. FDD

This indicator lights when the system accesses the FDD.

4. Number Lock

This indicator lights when the embedded keypad is toggled "ON" or an external keypad is in numeric mode.

5. CD-ROM

This indicator lights when the system accesses the internal CD-ROM .

6. Scroll Lock

This indicator lights when the Scroll Lock function is active. Press the Scroll Lock key again to deactivate this function.

7. S2R Mode

This indicator lights when the notebook is in the Save to RAM.

8. PCMCIA Card Slot B

This indicator lights when a PCMCIA card is installed .

9. PCMCIA Card Slot A

This indicator lights when a PCMCIA card is installed . Only slot A supports the ZV card.

10. Secondary Battery Icon

This indicator lights when the secondary battery pack is installed at System ON Mode or Power source is Adapter .

11. Main Battery Icon

This indicator lights when the primary (main) battery pack is installed .

12. Secondary Battery Charge Indicator

This indicator lights when the Secondary Battery is in full charge mode (unit is turned off).

13. Main Battery Charge Indicator

This indicator lights when the Main Battery is in charge mode (unit is turned off). If this indicator flickers continuously for more than eight hours, then this indicates that the battery may be damaged.

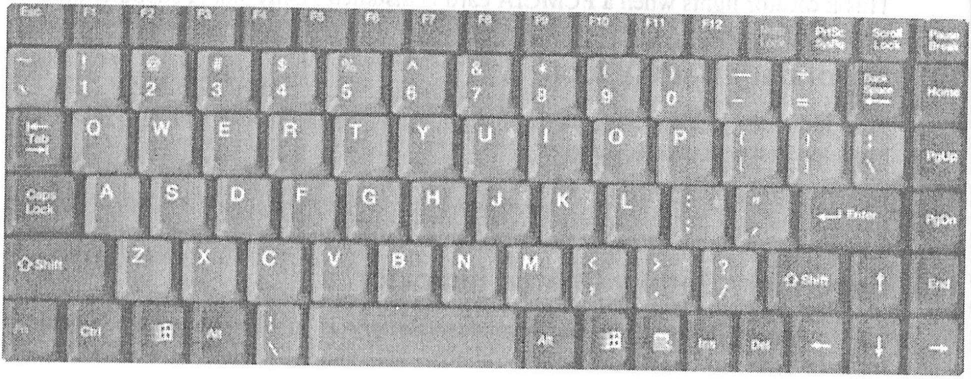
14. Power On/Off Icon

The Icon Indicates Status Of Power On & Off.

15. AC Power

This indicator lights when the system is operating on AC power.

2.8 Keyboard



* *US Keyboard layout*

2.9 Hot-key functions

You can use hot-key combinations to control system functions.

Hot-Keys	System Function
Fn+F1	NTSC/PAL/LCD toggle
Fn+F3	Increase contrast (DSTN panels only)
Fn+F4	Decreases contrast (DSTN panels only)
Fn+F5	Increases brightness
Fn+F6	Decreases brightness
Fn+F7	Increases volume
Fn+F8	Decreases volume
Fn+F9	Enters Standby mode
Fn+F10	Enters Suspend mode (Save to RAM)
Fn+F11	Enters Save to Disk mode
Fn+B	Enables/disables speaker and battery low warning beeps
Fn+T	Toggles display to CRT, CRT &LCD or LCD

To use a hot key combination, press and hold Fn and press the other hot key simultaneously. After pressing the last key, release both keys at once.

2.10 Touchpad

The built-in pointing device works just like a mouse. The pointing device is located below the keyboard. This pointing device detects the position of a finger over a touch-sensitive area. To move the cursor, slide a finger lightly over the smooth sensor area. To click, gently tap on the surface or click the left or the right touchpad buttons.

2.11 Power button

The power button on your notebook has got more uses than just ON and OFF, for security and power management reasons.

Power ON:

If the notebook is OFF (no power on light) then press down the power button to turn on the notebook.

Power OFF:

To turn off the notebook press the power button, if the notebook doesn't turn off immediately due to the notebook hang (lock-up) or other reason, then you need to press down the power button for 5 seconds until the notebook turns off. Please note that when the system is still in POST stage, the user has to press the button for 5 seconds to power off the system.

Wake up from Suspend-to-RAM:

When the notebook is in Suspend-to-RAM the power LED is flashing. To wake up from the Suspend-to-RAM cannot be done by pressing any key on the keyboard (during normal suspend any key can wake up the notebook), the only way to wake up the notebook is to press the power button.

Chapter 3 Software installation

These chapters explain how to install MS-DOS, Windows 95 / 98 and NT 4.0 onto an empty HDD. If your notebook was shipped with a pre-installed OS, then please skip this chapter.

If there should be a FDD diskette with drivers, then these drivers are newer than the drivers on the CD-ROM, please use these to install instead.

Warning:	If you for any reason decide to reinstall your operating system, then please make a backup of your important files, for this purpose a LS-120 or a ZIP drive is a very good backup device. See Chapter 8 for more information about these devices

3.1 MS-DOS 6.22

Create S2D Partition

1. Boot from bootable MS-DOS diskette from A drive.
2. Make sure there is no any partition on HDD.
3. Insert ZVHDD utility diskette into A drive
4. Type "ZVHDD /C /partition /M:(S2D size)

Install MS-DOS 6.22

(Suppose HDD has been formatted already, see MS-DOS user manual for details)

1. Insert MS-DOS Setup Disk into A drive to start the computer.
2. Click Enter to install MS-DOS.
3. Select "Continue Setup and replace your current version of DOS".
4. Check "Date/Time", "Country" and "Keyboard layout" are correct or not. If there is anything wrong, then press the UP and DOWN ARROW keys to select it and press Enter to look at the alternative. When all the settings are correct, then press Enter to continue setup.
5. To place MS-DOS files in default directory, press ENTER, if not, type its path and press ENTER.

6. After finish the installation of Disk#1, follow the displayed message and press ENTER to setup Disk#2.
7. After finish the installation of Disk#2, follow the displayed message and press ENTER to setup Disk#3.
8. After MS-DOS Setup is complete, press ENTER to restart the computer.

Install CD-ROM Drive

1. Boot computer from MS-DOS.
2. Insert CD-ROM drive diskette into A drive.
3. Create a directory called KME on HDD (type "MD KME" in C drive root directory).
4. Type "COPY A:\KMEATAPI.SYS C:\KME".
5. Use any editor to add following line to config.sys:

   "DEVICE=C:\KME\KMEATAPI.SYS /D:MSCD001 /P:S /O:M"

   Save and exit editor.
6. Use and editor to add the following line to autoexec.bat:

   "C:\DOS\MSCDEX.EXE /D:MSCD001 /M:15"

   Save and exit editor.
7. Press Ctrl-Alt-Del or power down.
8. After reboot or power on, the CD-ROM will be detected.

3.2 Windows 95

First follow the MS-DOS 6.22 installation to make a S2D partition and install the CD-ROM driver.

1. Insert Windows 95 CD into CD-ROM drive.
2. Type "D:\SETUP" under DOS prompt (Assume CD-ROM drive is D)
3. Refer to Windows 95 user manual to type CD-Key or enter user name.
4. Don't Check the following two selections when Windows95 install program scans these resources.

   ☐ Network adapter

   ☐ Sound, MIDI or video capture

   After finish Windows95 setup, system will reboot automatically and set up local time and printer.

Install VGA Driver

1. Point to Start -> Run -> "D:\WIN95\VGA\DISK1\SETUP.EXE"
2. Click "Finish" -> Click "OK" -> Type "D:\WIN95\VGA\DISK2"
3. Click "OK" -> Click "Yes" to restart your computer.
4. The window back to Advanced Display Properties then click Monitor.
5. Click Change, select "Standard monitor type for left panel and double click "Laptop Display 1024x768" for right panel then click "OK".
6. Click "Close", back to "Display Properties" to setup Desktop area and color palette.
7. System settings changes will ask if restart he computer or not, click "YES" to restart Windows 95.

Note: If your notebook is 12.1 SVGA, select 800x600 resolution instead of 1024x768 XGA resolution.

Install Sound driver

1. Insert Utility CD title into the CD-ROM Drive .
2. Point to Start →Setting →Control Panel →System →Device Manager →? Other Devices.
3. Select ? PCI Multimedia AudioDevices →Driver →Update Driver
4. Select "YES" →Next →Other Locations, type "D:\WIN95\SOUND" in the open box "Location"→OK→ Finish.
5. Select the source of copies files from "D:\WIN95\ SOUND", click "OK"
6. Close the window of "ESS Device Manager".

Install PCMCIA Socket

1. Point Start -> Run -> Type "D:\WIN95\PCMCIA\O2SETUP.EXE"
2. Click "OK" -> click "Install, then restart" to Restart your computer

3.3 Windows 98

First follow the MS-DOS 6.22 installation to make a S2D partition and install the CD-ROM driver.

1. Insert Windows 98 CD into CD-ROM drive.
2. Type "D:\SETUP" under DOS prompt (Assume CD-ROM drive is D)
3. Refer to Windows 98 user manual to type CD-Key or enter user name.
4. Don't Check the following two selections when Windows 98 install program scans these resources.

   ☐ Network adapter

   ☐ Sound, MIDI or video capture

   After finish Windows 98 setup, system will reboot automatically and set up local time and printer.

Install VGA Driver

1. Point to Start -> Run -> "D:\WIN98\VGA\DISK1\SETUP.EXE"
2. Click "Finish" -> Click "OK" -> Type "D:\WIN98\VGA\DISK2"
3. Click "OK" -> Click "Yes" to restart your computer.
4. The window back to Advanced Display Properties then click Monitor.
5. Click Change, select "Standard monitor type for left panel and double click "Laptop Display 1024x768" for right panel then click "OK".
6. Click "Close", back to "Display Properties" to setup Desktop area and color palette.
7. System settings changes will ask if restart he computer or not, click "YES" to restart Windows 98.

Note:	If your notebook is 12.1 SVGA, select 800x600 resolution instead of 1024x768 XGA resolution.

Install Sound driver (Update)

1. Insert Utility CD title into the CD-ROM Drive .
2. Point to Start →Setting →Control Panel →System →Device Manager →?Other Devices->Yellow "!" PCI Multimedia Audio Device
3. Click Driver →Update Driver…→Next
4. Click "Next" button to display a list of all the drivers
5. Select "Sound, Video and Game controllers" →click Next
6. Click "Have disk"
7. Browse to "D:\WIN98\SOUND" then click "OK" three times and then "Next"
8. Click "Finish"
9. Close the window of "ESS Device Manager Properties".

Install PCMCIA Socket

1. Point Start -> Run -> Type "D:\WIN98\PCMCIA\O2SETUP.EXE"
2. Click "OK" -> click "Install, then restart" to Restart your computer

3.4 Windows NT 4.0

1. Insert "Microsoft NT Workstation Disk1" into A drive to boot then insert "Microsoft Workstation NT4.0" into CD-ROM.
2. Follow display instruction to change Disk.
3. Until it show format the partition using the FAT file system,. Formate the partition using the NTFS file system then select one file system that fits your requirement.
4. Check Multimedia when you are at the selection of select components.
5. When you are in the "selection of display properties", user don't do any change action just click "OK" to keep install.
6. After restart, please select "WindowsNT Workstation ver 4.00"

Install Sound Driver:

1. Insert the Utility CD into the CD-ROM drive and then double click "Device" of Multimedia in the Control Panel
2. Double click ADD when the light bar is in the "Multimedia Drivers".
3. Double click "OK" when the light bar is in the "Unlisted or Update Driver".
4. Browse to "D:\WINNT\SOUND" then click "OK"
5. Choose "Ess Maestro PCI Driver" and follow all instructions on your screen.
6. Restart the notebook

3.5 Other OS

There are many other OS like OS/2 Warp, Linux, Unix, BSD etc. that will work in your notebook. To install these OS please refer to the installation guide with your OS, for VGA and Sound drivers you might find them on the Internet, see Chapter 3.6 for Internet addresses to the different hardware vendors.

3.6 New software drivers over the Internet

Drivers change regularly, either to fix bugs or to make upgrades to speed up the performance. It's recommended that you always use the latest drivers. If you have access to the Internet you can go to these addresses and search for a newer driver:

Device	Address	Search for
VGA	http://www.atitech.com	ATI Rage Pro LT
Sound	http://www.esstech.com	ESS Maestro-2 (1968)
PCMCIA	http://www.o2micro.com	O2 Micro 6860
Chipset	http://www.intel.com	Intel 440BX
I/O contr.	http://www.ns.com	NS PC97338
*BIOS	http://www.award.com	
CD-ROM	http://www.kme.com	See your CD-ROM
DVD-ROM	http://www.kme.com	See your DVD-ROM
ZIP drive	http://www.iomega.com	ZIP drive
LS-120 drive	http://www.ortechnology.com	LS-120
CPU	http://www.intel.com	Depend on which CPU you have
Vendor	http://www.______________	Write down your vendors address

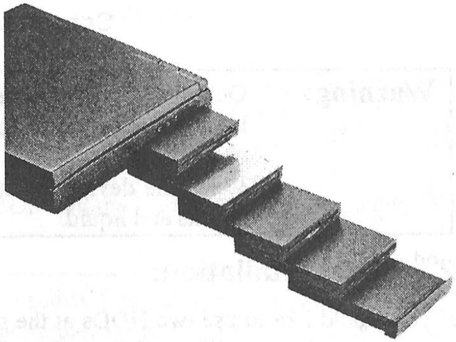
* Note that the latest BIOS is NOT available on Awards homepage, ask your vendor where you can download future BIOS versions.

Chapter 4 Smartbays

When you bought your notebook, you probably only got a FDD and a CD-ROM, but there are many ways to enhance and personalize your notebook with the smartbays. If you travel a lot and need all the battery life you can get, a 2nd battery makes sense. If you do a lot of presentations, or need to save large amounts of data a LS-120 or a ZIP would be very handy, a 2nd HDD would give you even higher capacity and much faster speeds.

4.1 FDD bay

The FDD module is easily replaced with another module. Currently these modules are available:



FDD drive	1.44MB (3 mode)
ZIP drive	100MB capacity
LS-120 drive	120MB capacity
2nd Battery	Doubles your battery life
2nd HDD	Standard 2.5" HDD with several GB capacity (17mm high max)

For more information about these optional devices see Chapter 8.

Special Attention:

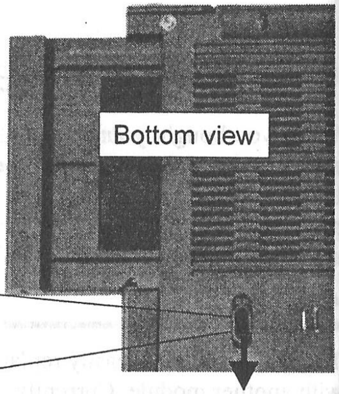
To avoid your SmartBay accessories, such as the battery, CD-ROM and FDD from being removed easily during traveling, we advise you to put on the screws on the locks found at the bottom of the notebook so in this way the locks won't move.

In case you would like to interchange your FDD with ZIP drive, please kindly remove the screw of the lock for the FDD so you can remove the FDD from it's bay. After interchanging the FDD, please don't forget to put the screw on the lock.

The screw for the battery's lock can be found on the gift box packed together with this manual.

Removing the SmartBay Device:

To remove the FDD bay device, release the knob and pull the device out. Insert the new device until you hear a click.



Release knob for FDD bay

Security screw hole

Warning: Only remove the device when the power is off, failing to do so could hurt your data and/or your notebook computer.

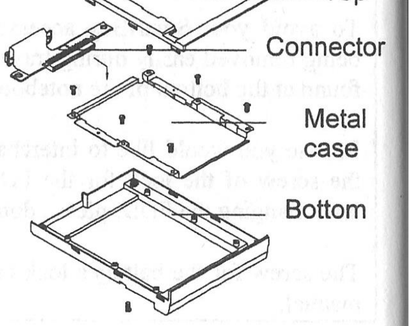
When the device is out of the computer it should be protected from shocks and liquid.

2nd HDD installation:

If you would like to use two HDDs at the same time, then you can buy the 2nd HDD SmartBay. Depending on your dealer this might be sold with or without a HDD in it, if there is already a HDD then ignore this assembly instruction.

Assembly any 2.5" HDD (9.5, 12.7 or 17mm height) in the 2nd HDD SmartBay as shown:

1. Attach the 'Metal case' to the 'Bottom'
2. Attach the 'Connector' to the 'Metal case'
3. Put on the 'Top'
4. Slide in the 'HDD' (no screws necessary)
5. Put on the 'Small top'



External FDD:

It's possible to have the FDD attached to the Printer port as well. This is very good when you are using the FDD-bay with another device.

Note: Only the standard FDD can be connected externally and not the other FDD-bay devices.

4.2 CD–ROM bay

The CD-ROM can be replaced either by a faster CD-ROM (maximum speed is 24x) or a DVD-ROM. The DVD can play standard CD's as well as DVD discs.

CLASS 1 LASER PRODUCT

LASER KLASSE 1

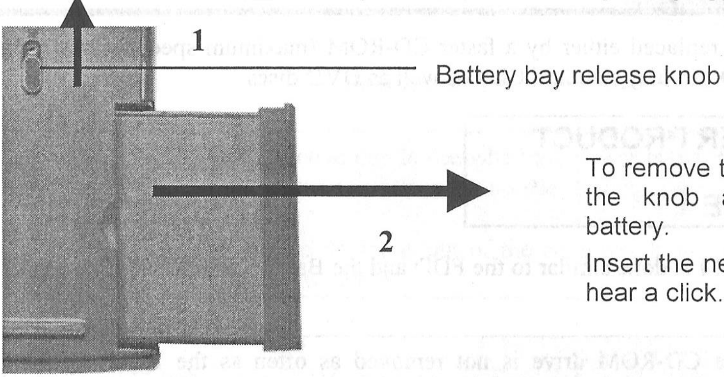
To remove the CD-ROM is done similar to the FDD and the Battery, please see Chapter 4.1 and 4.3 respectively.

Note: The CD-ROM drive is not removed as often as the FDD nor the battery, we strongly recommend the use of the Security screw which should at all times be locked in it's position.

4.3 Battery bay

The main battery can be exchanged with a higher capacity battery or a fully recharged battery. There are two types of batteries available, Li-Ion and NI-MH. If you are concerned about the weight of your notebook we recommend the Li-Ion battery since it's half the weight of the Ni-MH.

You can replace the battery while power is on provided that either a secondary battery is installed (in the FDD bay, see Chapter 4.1) or the AC-adapter is plugged in.



To remove the battery, release the knob and pull out the battery.

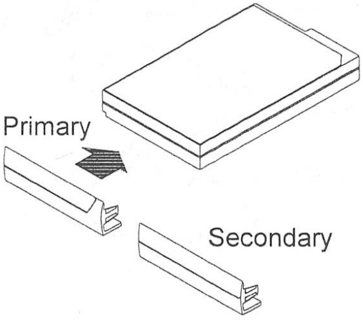
Insert the new battery until you hear a click.

Warning: Handle batteries carefully and don't tamper with the connectors, short circuit of the battery leads can lead to serious injuries.

Empty batteries should be returned to battery collecting sites and not thrown away in the garbage.

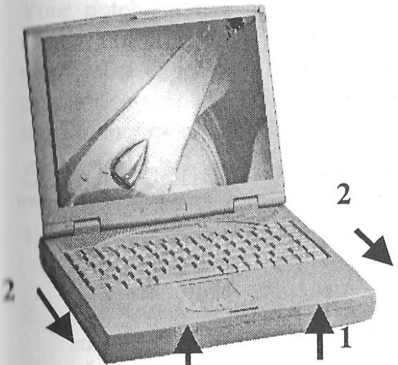
Note: The battery cover for Primary and Secondary batteries are not the same. The battery itself is the same.

See the picture to the right for the difference between Primary and Secondary battery covers.

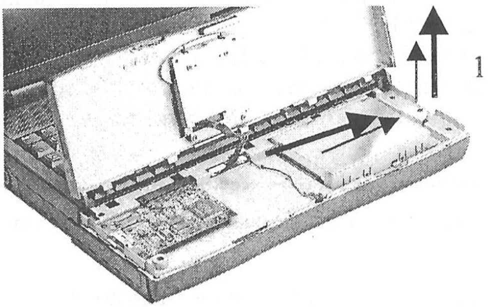


4.4 HDD bay

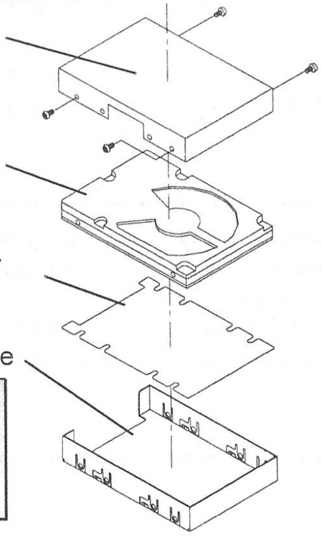
The HDD can be replaced easily with a higher capacity drive. Many people like to have many HDD drives for different purposes or for backup.



First pull up the two lids in the front of the notebook, then drag the whole palmrest towards you.



The HDD is located to the right. Push the HDD to the right and then lift up to remove it.



If you want to install a new HDD then follow the drawing to the right how to mount the HDD into the

Note: When the HDD is out of the notebook it is very vulnerable. Treat it very carefully.

If your data is valuable, back it up!

Chapter 5 Batteries

5.1 Different kind of batteries

Your notebook can be equipped with two kinds of batteries, Li-Ion and Ni-MH. The capacity of these batteries are almost the same, while the Li-Ion battery is much lighter and much more expensive. Both batteries have the same external size and can be used either as primary or secondary battery in your notebook. The battery pack is proprietary, so if you need to buy more batteries you can only buy batteries of the same kind.

5.2 Recharging the batteries

1. For best battery charging performance, make sure the battery pack is fully discharged prior to charging.
2. The battery shall start to charge either main – or second battery is installed while AC adapter is already in connection, or the battery shall start to charge whenever AC adapter is plugged in while either main-or second battery is already installed. If both are present, charging main battery takes precedence over charging the second battery.
3. No change of charging priority during uninterrupted charging time and until main – or second battery achieves Battery-Full detection .
4. Please check the charging icon for understanding the battery charging condition . The charging icon will stay on if the battery is in charging state and will disappear if the battery is in fully charged state.

5.3 Battery maintenance

To maintain the battery pack's maximum capacity, occasionally you should let the Notebook deplete its DC power completely before the battery is recharged. To carry out a complete depletion of the battery, disconnect the AC adapter and let your Notebook use up the remaining battery energy. When the battery is empty wait for the Notebook to cool down, especially the battery temperature should be under 25°C, and insert the AC adapter to charge the battery.

5.4 Removing the battery

See Chapter 4.3, Battery bay how to remove the battery

5.5 The Best Battery Life for Storage

Storage Temperature & Humidity

Storage outside the specified temperature range or in extremely high humidity may accelerate deterioration of battery materials, cause leakage or corrosion of metal parts of battery.

Long Storage (more than 3 months)

In case of long storage, the battery must be charged at 30-50% to save a loss by self-discharge and avoid deterioration of battery performance. The battery voltage decreases faster for long storage at discharge condition. When the battery voltage is below 1.5V/cell, the capacity will decrease extremely even after re-charge. On the other hand, storage at 100% charged condition causes bigger self-discharge and deterioration of discharge capacity even after re-charge comparing to storage at 30-50% charge condition.

5.6 Power consumption

The Notebook's power use the C.P. (Constant Power) management, When the system turn off, the system power will used 35 Watt for the full charge mode, When the system turn on, the power will support system power and charger power at maximum 48 Watts.

5.7 Reducing power consumption

Although power conservation is a built-in function in your Notebook, there are measures you can take to reduce the power consumption:

- Use AC power whenever possible.
- Lower the intensity of the LCD backlight. A very bright screen translates to higher power usage.
- Try to use the HDD, to read and write files rather than using the FDD.
- Don't use "screensavers" since these use a lot of the CPU power, a blank screen is much better

5.8 Battery LED and Alarm

When only 10 minutes battery life remains the notebook will make a battery low alarm, this can be turned off by pressing Fn + B. During these 10 minutes you can either insert a new fully recharged battery in the FDD bay (secondary battery) or plug in the AC-adapter. If you fail to do so within these 10 minutes the notebook will save your data to the HDD (the HDD needs to be prepared for this first, see Chapter 3) to prevent data loss. Next time you turn on the notebook you will start up where you left off.

5.9 Lithium Battery Disposal

Under the keyboard, between C and V keys is a small Lithium battery for CMOS backup, this keeps track of the time and date. If the notebook looses the time and date this battery should be replaced. See Appendix E, how to locate the Lithium battery.

***ADVARSEL!**

Lithiumbatteri - Explosionsfare ved fejlagtig håndtering. Udskiftning må kun ske med batteri af samme fabrikat og type. Lever det brugte batteri tilbage til leverandøren oder tillverkaren uden kostand.

WARNING!

Lithium battery - Danger of explosion if battery is incorrectly handled. Replacement can only be done with' a battery of same kind and from the same manufacturer. Return the old battery to the manufacturer or dealer free of charge.

*Danish text for Demko approval

5.10AC adapter

Notes: The AC adapter can accept a line voltage ranging from 100V to 240V. For different cords to the outlet ask your dealer or buy in any electrical store.

Caution: This unit is to be used with Delta model ADP-50VB, or Proton model SPN-60-19A

Attention: Pour utiliser avec Delta modèle ADP-50VB 'Proton' modèle SPN-260-19A.

5.11 Battery Safety notice

RECHARGEABLE BATTERY

Li-Ion Type

DO NOT CRUSH, PUNCTURE, INCINERATE OR SHORT EXTERNAL CONTACTS. LITHIUM-ION BATTERY MUST BE RECYCLED OR DISPOSED OF PROPERLY. PLEASE USE ONLY WITH SPECIFIED CHARGER AND SUPPLIED AC ADAPTOR FOR BATTERY CHARGING.

CAUTION

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions

VORSICHT!

Explosionsgefahr bei unsachgemäßem Austausch der Batterie. Ersatz nur durch denselben oder einen vom Hersteller empfohlenen gleichwertigen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

ATTENTION

Il y a danger d'explosion s'il y a remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type recommandé par le construteur. Mettre au rébut les batteries usagées conformément aux instructions du fabricant.

ADVARSEL!

Lithiumbatteri Eksplosionsfare ved fejlagtig håndtering. Udskiftning må kun ske med batteri at samme fabrikat og type. Lever det brugte batteri tilbage til leverandøren.

VARNING

Explosionsfara vid felaktigt batteribyte. Anvãnd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren. Kassera använt batteri enligt fabrikantens instruktion.

VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu. Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

Chapter 6 Power Management

6.1 Full on mode

This is the normal operation mode, when the notebook has not entered any suspend or power saving modes.

6.2 Standby mode

There are two ways to enter the standby mode:

1. The Standby timer was timed out
2. The Standby Hot-Key was pressed (Fn+F9)

All CPU and peripheral activity must have ceased prior to entering the Standby. VGA activity (like clock updates) does not prevent the notebook from entering the standby mode.

When the notebook enters the Standby mode these things will occur:

1. The Standby LED will alight
2. Both the HDD and VGA controller will enter Standby mode to save power
3. The internal clock in the CPU will stop

There are four ways the notebook will resume from the Standby mode:

1. Any system activity detected
2. Movement of the mouse (touchpad or external mouse) or any keystroke
3. RTC alarm ring
4. Modem ring from serial or Cardbus source

6.3 Suspend / Suspend to RAM

Two conditions will cause the notebook to enter the Suspend mode:

1. The Suspend Timer was timed out
2. The Suspend Hotkey was pressed (Fn+F10)

When the notebook enters the Suspend mode these things will occur:

1. The Standby LED will flash
2. Most devices are powered off, except the system DRAM refresh function and SMI inputs watching for internal keystroke, RTC alarm or modem ring
3. VGA enters Suspend mode to keep the Video RAM refresh

There are three ways the notebook will resume from the Suspend mode:

1. Internal keystroke (Power on button be pressed)
2. RTC alarm ring
3. Modem ring from serial or Cardbus source

6.4 0 Volt Suspend mode / Suspend to disk

Four conditions will cause the notebook to enter the Suspend mode:

1. The Suspend Timer was timed out and the 0 Volt suspend condition is matched
2. The Suspend Hotkey was pressed (Fn+F11)
3. Low battery warning has been issued and the battery is going into Low Low battery
4. If the temperature of the CPU should become over the maximum allowed (depending on the CPU you use)

When the notebook enters the 0-Volt Suspend mode, all components except the RTC and the power switch will be turned off.

The only way to resume from the 0-Volt Suspend mode is to press the Power On button

Chapter 7 Connectors and Peripherals

7.1 CRT port

Here you can connect an external monitor, like standard CRT monitors.

7.2 USB port

USB stands for Universal Serial Bus; this is a new connector for keyboard, mouse, digital camera, modem, joystick, printer etc. The USB port will replace the slower serial and parallel ports, if you plan to buy a new device ask your dealer for their USB devices, you can also see all devices available on the Internet: http://www.usb.org

7.3 Parallel port

Most printers are connected to the parallel port as well as some "pocket" devices like network adapters. If you intend to copy files between computers using "Direct Cable Connection" under Windows 95, the parallel port is much faster than the serial port.

7.4 Game port

To the game port you can connect a joystick, game pads, flight sticks and other game devices.

7.5 Serial port

Here you can connect either an external modem or a serial mouse.

7.6 PS/2 port

The PS/2 port can either connect a PS/2 mouse or a PS/2 keyboard. If your keyboard connector is much larger than the PS/2 connector you can buy a transfer connector. There are also many pocket adapters that require power from the PS/2 port, these devices usually have a through port connector.

7.7 Video In/Out connectors

To the Video-In port you can connect a Video camera, VCR or another video signal. You can use this video signal for videoconference. Your notebook supports both PAL and NTSC signals, this is changed by software.

You can also connect the notebook to a TV or a video device via the Video-Out port, then you can display the notebook screen on that device, like a large screen TV. The maximum resolution on a TV is only 640x480.

7.8 Audio connectors

There are three audio connectors; Microphone, Speaker and Line-in. Your notebook has got a built-in microphone as well as two stereo speakers. It's very easy to connect your notebook to your audio system at home where you probably have large powerful speakers, this gives a whole new dimension to games, movies etc.

7.9 IrDA interface

With the IrDA interface in your notebook you can connect to other notebooks and some printers. Note that the IrDA in your notebook is FIR standard and can transfer up to 4MB/s, while many other notebooks can only transfer 1MB/s. The specification of IrDA is one meter further than that can cause transmission problems and slower speeds.

Chapter 8 Optional accessories

For installations of any of these devices please refer to the installation manual with your accessory, some devices might not have a manual, like 2nd battery. See Chapter 4 how to remove and insert the SmartBay devices.

8.1 LS-120 drive

LS-120 is also referred to as the next generation FDD since it's backward compatible (you can read all your old 3.5" FDD's in the LS-120) and you can save 120MB on a special LS-120 diskette. The speed is five times faster than the FDD.

8.2 ZIP drive

ZIP drives are very popular in desktop computers as well as external units for older notebooks, your notebook can have this drive built-in. The ZIP drive is 20 times faster than a FDD and can store 100MB on a ZIP diskette. Note that floppy diskettes cannot be read in the ZIP drive.

8.3 2nd Battery

With a 2nd battery you can double the battery life in your notebook. You can use two batteries at the same time as you use the CD-ROM or DVD. The 2nd battery is the same size as the primary battery and can easily be used in either the primary or the secondary battery bay. The battery is smartbattery so you can see how much power there is left in the battery by clicking on the button on the battery pack or see the status under Windows 95.

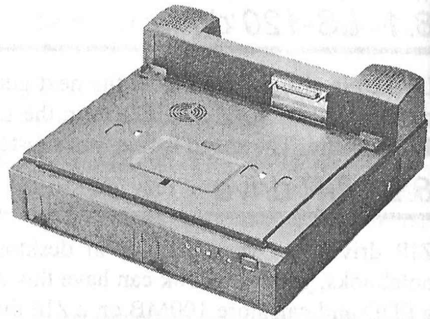
8.4 2nd HDD

Use a 2nd HDD as a backup device, you can easily copy the whole HDD to a large secondary drive, or you can use the primary HDD for programs and the secondary for data, the speed of a HDD is much faster than both CD, FDD, ZIP and LS-120.

8.5 DVD-ROM

DVD is the new medium that will eventually replace CD. The DVD-ROM for your notebook can also play/view all regular CD's.

8.6 Docking station

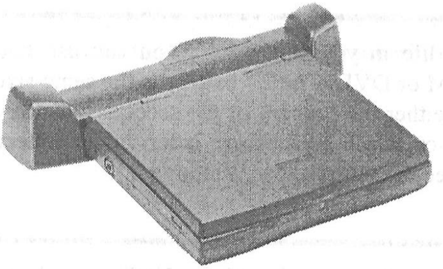


The Docking Station is an excellent accessory to expand your notebook. In the Docking Station there are two bays where you can put your smartbay devices, see 8.1 to 8.6.

You can also put one PCI card (not VGA) in the available slot.

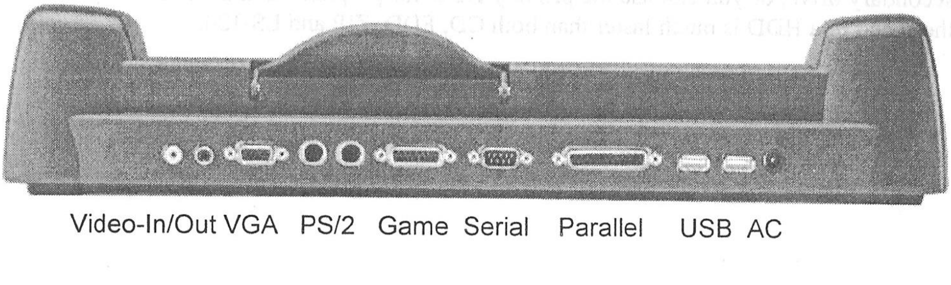
All the ports on the back of your notebook are all replicated in the rear.

8.7 Port Replicator



With the Port Replicator you no longer need to have the hassle to plug in all the cables whenever you come back from travelling. Many people that use a notebook prefer to use external mouse, big keyboard, CRT monitor, joystick, hook it up to a printer etc when in office or at home.

All the ports on the back of your notebook are all replicated in the rear.



Appendix A Setting up the BIOS

A.1 Introduction

The Award BIOS installed in your computer provides critical low-level support for standard devices such as disk drives and serial and parallel ports.

The Award BIOS has been customized by adding important, but non-standard, features such as virus and password protection as well as special support for detailed fine-tuning of the chipset controlling the entire system. You can therefore only get BIOS upgrades from your notebook vendor and not from Award.

Starting Setup

Press <Del> immediately after switching the system on, or by pressing the <Del> key when the following message appears briefly at the bottom of the screen during the POST (Power On Self Test).

Press DEL to enter SETUP.

Using Setup

Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item in the left hand
Right arrow	Move to the item in the right hand
Esc key	Main Menu -- Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu -- Exit current page and return to Main Menu
PgUp key	Increase the numeric value or make changes
PgDn key	Decrease the numeric value or make changes
+ key (keypad)	Increase the numeric value or make changes
- key (keypad)	Decrease the numeric value or make changes
F1 key	General help, only for Status Page Setup Menu and Option Page Setup Menu
F5 key	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
F7 key	Load the default
F10 key	Save all the CMOS changes, only for Main Menu

Getting Help

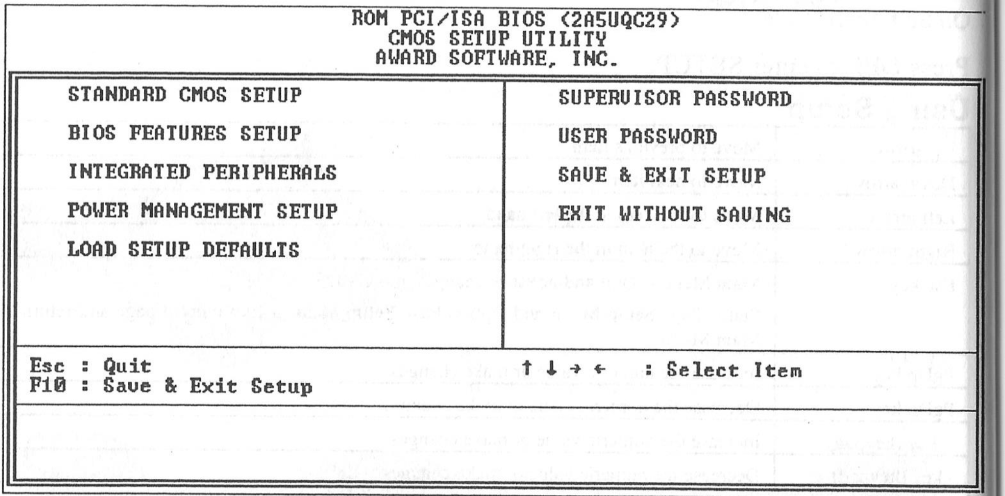
Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window press <Esc> or the F1 key again.

In Case of Problems

If, after making and saving system changes with Setup, you discover that your computer no longer is able to boot, the Award BIOS supports an override to the CMOS settings which resets your system to its defaults.

The best advice is to only alter settings which you thoroughly understand. To this end, we strongly recommend that you avoid making any changes to the chipset defaults. These defaults have been carefully chosen by both Award and your systems manufacturer to provide the absolute maximum performance and reliability. Even a seemingly small change to the chipset setup has the potential for causing you to use the override.

A.2 Main Menu

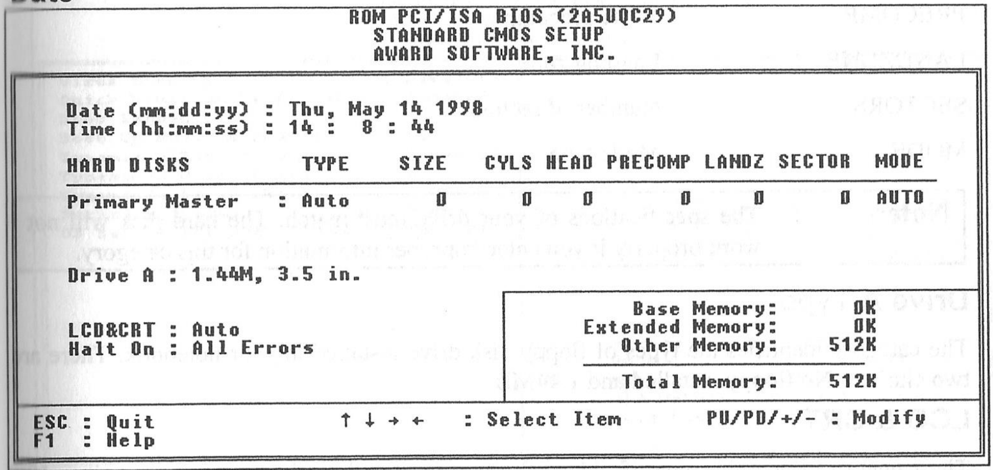


```
                       ROM PCI/ISA BIOS (2A5UQC29)
                          CMOS SETUP UTILITY
                         AWARD SOFTWARE, INC.

   STANDARD CMOS SETUP                  SUPERVISOR PASSWORD

   BIOS FEATURES SETUP                  USER PASSWORD

   INTEGRATED PERIPHERALS               SAVE & EXIT SETUP

   POWER MANAGEMENT SETUP               EXIT WITHOUT SAVING

   LOAD SETUP DEFAULTS

 Esc : Quit                             ↑ ↓ → ←   : Select Item
 F10 : Save & Exit Setup
```

Once you enter the Award BIOS CMOS Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several setup functions and two exit choices, see the following pages for descriptions of these sub menus.

A.3 Standard CMOS Setup

Date



```
                     ROM PCI/ISA BIOS (2A5UQC29)
                         STANDARD CMOS SETUP
                        AWARD SOFTWARE, INC.

  Date (mm:dd:yy) : Thu, May 14 1998
  Time (hh:mm:ss) : 14 :  8 : 44

  HARD DISKS          TYPE    SIZE   CYLS HEAD PRECOMP LANDZ SECTOR  MODE
  Primary Master    : Auto       0      0    0       0     0      0  AUTO

  Drive A : 1.44M, 3.5 in.

                                               Base Memory:      0K
  LCD&CRT : Auto                           Extended Memory:      0K
  Halt On : All Errors                        Other Memory:    512K

                                              Total Memory:    512K

 ESC : Quit              ↑ ↓ → ←   : Select Item       PU/PD/+/- : Modify
 F1  : Help
```

The date format is <day>, <date> <month> <year>. Your notebook supports all years from 1994 to 2079.

Time

The time format is <hour> <minute> <second>. The time is calculated based on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00.

Primary Master

We recommend you to use the AUTO setting, it will Auto-Detect the HDD & CD-ROM Drive at the POST stage and showing the IDE for HDD & CD-ROM Drive.

If you select Type “user”, you will need to know the information listed below. This information should be included in the documentation from your hard disk vendor or the system manufacturer.

CYLS.	Number of cylinders
HEADS	Number of heads
PRECOMP	Write precomp
LANDZONE	Landing zone
SECTORS	Number of sectors
MODE	Mode type

Note: The specifications of your drive must match. The hard disk will not work properly if you enter improper information for this category.

Drive A Type

The category identifies the types of floppy disk drive installed in your notebook. There are two choices: No floppy installed and 1.44MB.

LCD & CRT

The category selects the type of video adapter used for the primary system monitor. If a CRT (external monitor) is attached the default is the CRT& LCD. The choices arė: LCD, CRT and Both.

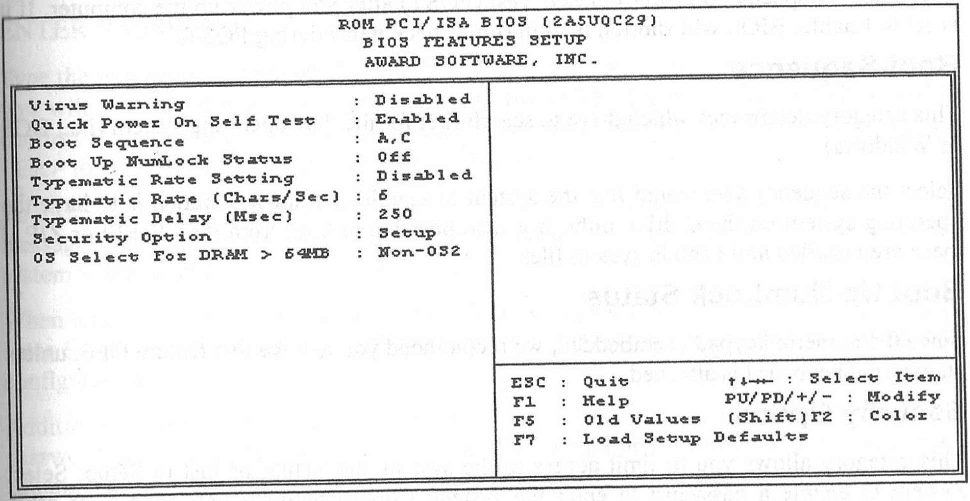
Halt On

This category determines whether the computer will stop if an error is detected during power up. If you select Keyboard, Disk or Both and the notebook have problem with the selected device it will not stop due to this error. If you don't want the notebook to stop eventhough there might be some non-fatal errors, then select No.

Memory

The various memory are for display only and cannot be changed by the BIOS. The total amount displays how much memory is installed in your notebook.

A.4 BIOS Features Setup



```
                    ROM PCI/ISA BIOS (2A5UQC29)
                       BIOS FEATURES SETUP
                       AWARD SOFTWARE, INC.

Virus Warning                      : Disabled
Quick Power On Self Test           : Enabled
Boot Sequence                      : A,C
Boot Up NumLock Status             : Off
Typematic Rate Setting             : Disabled
Typematic Rate (Chars/Sec)         : 6
Typematic Delay (Msec)             : 250
Security Option                    : Setup
OS Select For DRAM > 64MB          : Non-OS2

                                   ESC : Quit          ↑↓→← : Select Item
                                   F1  : Help          PU/PD/+/- : Modify
                                   F5  : Old Values    (Shift)F2 : Color
                                   F7  : Load Setup Defaults
```

This section allows you to configure your system for basic operation. You can select the system default speed, boot-up sequence, keyboard operation, shadowing and security.

Virus Warning

When this item is enabled, the BIOS will monitor the boot sector and partition table of the HDD for any attempt at modification. If an attempt is made, the BIOS will halt the system and the following warning message will appear. Afterwards, if necessary, you will be able to run an anti-virus program to locate and remove the problem before any damage is done.

If Enabled the warning message will pop-up every time a program tries to write to the HDD partition table (most virus are located there).

Not only virus reside in this area and some programs, like Windows, require this feature to be disabled in order to be properly installed.

Note: Many disk diagnostic programs which attempt to access the boot sector table can cause the above warning message. If you will be running such a program, we recommend that you first disable Virus Protection beforehand.

Quick Power On Self Test

This category speeds up Power On Self Test (POST) after you power up the computer. If it is set to Enable, BIOS will shorten or skip some check items during POST.

Boot Sequence

This category determines which drive to search first for the disk operating system (i.e., DOS or Windows).

Select the sequency you would like the system to search first, most common is to have the operating system on the C drive only. It is also possible to boot from the LS-120 or ZIP if these are installed and contain system files.

Boot Up NumLock Status

Since the numeric keypad is embedded, we recommend you to have this feature OFF, unless an external keyboard is attached.

Security Option

This category allows you to limit access to the system and Setup, or just to Setup. Select System to enable a password to enter the system. Choose Setup if you don't want other people to enter your Setup.

Note:	To disable security, select PASSWORD SETTING at Main Menu and then you will be asked to enter password. Do not type anything and just press <Enter>, it will disable security. Once the security is disabled, the system will boot and you can enter Setup freely.

OS Select for DRAM > 64

This item allows you to access the memory that over 64MB in OS/2.

A.5 Supervisor/User Password Setting

You can set either supervisor or user password, or both of then. The differences between them are:

Supervisor password - Can enter and change the options of the setup menus.

User password - Can only enter but do not have the right to change the options of the setup menus.

When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

ENTER PASSWORD:

Type the password, up to eight characters in length, and press <Enter>. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

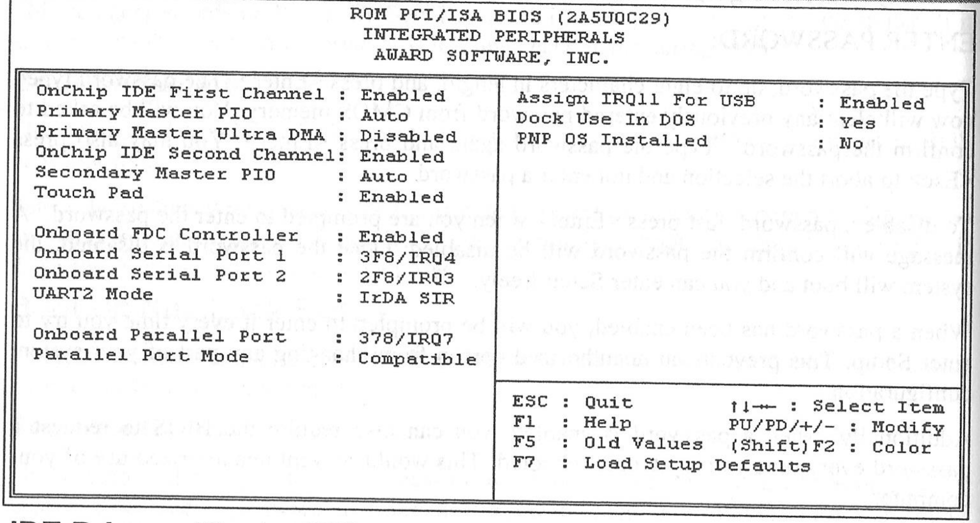
To disable a password, just press <Enter> when you are prompted to enter the password. A message will confirm the password will be disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

When a password has been enabled, you will be prompted to enter it every time you try to enter Setup. This prevents an unauthorized person from changing any part of your system configuration.

Additionally, when a password is enabled, you can also require the BIOS to request a password every time your system is rebooted. This would prevent unauthorized use of your computer.

You determine when the password is required within the BIOS Features Setup Menu and its Security option (see Chapter A.4). If the Security option is set to System, the password will be required both at boot and at entry to Setup. If set to Setup, prompting only occurs when trying to enter Setup.

A.6 Integrated Peripherals



```
                         ROM PCI/ISA BIOS (2A5UQC29)
                          INTEGRATED PERIPHERALS
                           AWARD SOFTWARE, INC.

 OnChip IDE First Channel  : Enabled      Assign IRQ11 For USB     : Enabled
 Primary Master PIO        : Auto         Dock Use In DOS          : Yes
 Primary Master Ultra DMA  : Disabled     PNP OS Installed         : No
 OnChip IDE Second Channel: Enabled
 Secondary Master PIO      : Auto
 Touch Pad                 : Enabled

 Onboard FDC Controller    : Enabled
 Onboard Serial Port 1     : 3F8/IRQ4
 Onboard Serial Port 2     : 2F8/IRQ3
 UART2 Mode                : IrDA SIR

 Onboard Parallel Port     : 378/IRQ7
 Parallel Port Mode        : Compatible
                                          ESC : Quit        ↑↓→← : Select Item
                                          F1  : Help        PU/PD/+/- : Modify
                                          F5  : Old Values  (Shift)F2 : Color
                                          F7  : Load Setup Defaults
```

IDE Primary Master PIO

The four PIO (Programmed Input/Output) fields let you set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In *Auto* mode, the system automatically determines the best mode for each device.

IDE Primary Master Ultra DMA

This function supports Ultra DMA HDD, you can choose Auto or Disabled.

OnChip Primary PCI IDE

The chipset contains a PCI IDE interface with support for two IDE channels. Select *Enabled* to activate the first/secondary on-chip IDE interface. Select *Disabled* to deactivate this interface, if you install a first/secondary add-in IDE interface.

Onboard FDC Controller

The chipset contains a PCI IDE interface with support for two floppy. Select *Enabled* to activate the floppy on-chip IDE interface.

Onboard Serial Port1/Port2

This select the COM port IO address , if you don't want to choice. Choices are: Disabled, 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4 and 2E8/IRQ3.

UART2 Mode

When you want to use Modem or Ir , you must select this function to decide which you use. Choices are: Modem, Sharp IR, IrDA SIR, IrDA FIR.

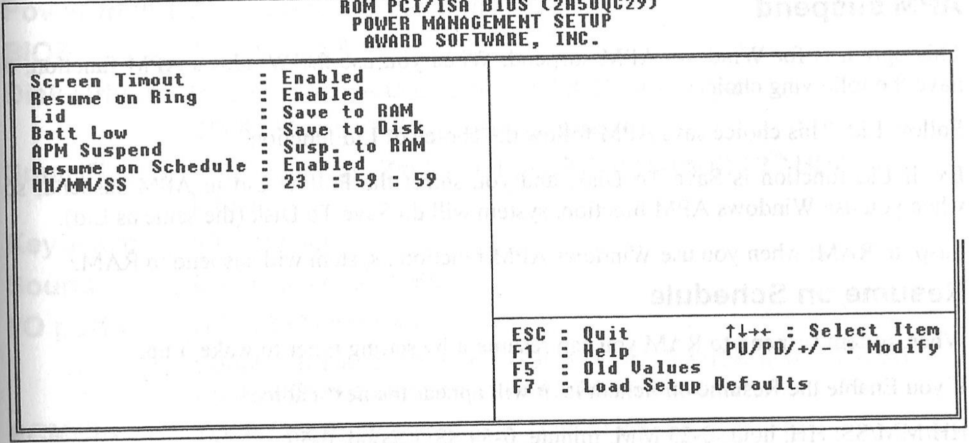
Onboard Parallel Port

This selects the Parallel port IO address. Choices are: Disabled, 3BC/IRQ7, 378/IRQ7, 278/IRQ5.

Parallel Port Mode

This function select the Parallel port mode. If you choose EPP mode, you can select 'EPP Version', '1.7' or '1.9'. If you choose ECP mode, you can select 'ECP Mode Use DMA','1' or '3'. Choices are: Compatible, EPP, ECP.

A.7 HPM Power Management Setup



```
                 ROM PCI/ISA BIOS (2A5UQC29)
                   POWER MANAGEMENT SETUP
                   AWARD SOFTWARE, INC.

Screen Timout          : Enabled
Resume on Ring         : Enabled
Lid                    : Save to RAM
Batt Low               : Save to Disk
APM Suspend            : Susp. to RAM
Resume on Schedule     : Enabled
HH/MM/SS               : 23  :59 : 59

                              ESC : Quit           ↑↓→← : Select Item
                              F1  : Help           PU/PD/+/- : Modify
                              F5  : Old Values
                              F7  : Load Setup Defaults
```

The Power Management Setup allows you to configure you system to most effectively save energy while operating in a manner consistent with your own style of computer use.

Screen Timout

This option allows you to enable monitor timer ,if you don't use the computer for a long of time, system will turn off the display device to save your battery time.

Resume on Ring

If you do suspend to RAM , you can use modem ring to wake up your computer.

Lid

If you press the Lid , system will either:

Save To Disk - Suspend to Disk.

Save To RAM - Suspend to RAM.

Batt Low

When the battery of your computer is Low power, system will either:

Save To Disk - Suspend to Disk

Save To RAM - Suspend to RAM

APM suspend

This option is for Windows APM suspend. When you use the Windows APM function, it have the following choices.

Follow Lid: This choice says APM follow the choice of Lid function

Ex: if Lid function is Save To Disk, and you select the Follow Lid in APM suspend, so when you use Windows APM function, system will do Save To Disk (the same as Lid).

Susp. to RAM: when you use Windows APM function , system will suspend to RAM.

Resume on Schedule

When system suspend to RAM you can resume it by setting timer to wake it up.

If you Enable the Resume on Schedule, it will appear the next choice

HH/MM/SS: HH: hour, 0-23 MM: minute, 0-59 SS: second, 0-59

Appendix B Specifications

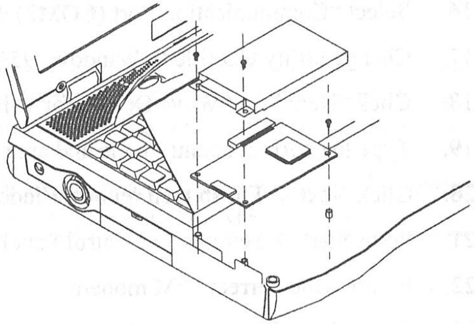
CPU	Pentium II with MMX 233-366MHz (Intel MMC-II Module)
Core Logic	Intel 440BX
Memory	Base Memory 0 MB Memory Expand to 0-256 MB, 144-pin x2, DIMM (SDRAM)
Cache	Cache (L1 / L2) 32kb / 512kb
Display	ATi Rage Pro LT Display Memory 4MB
LCD	TFT Color, 12.1" / 13.3" / 14.1" / 15.0" (12.1") SVGA 800x600, (13.3"-15.0") XGA 1024x768 high colors
Battery	Smart Battery compatible Ni-MH 4000mAH or Li-Ion 4800mAH (same Primary/Secondary)
Pointing dev	Touchpad
Power mgmt	Doze, Sleep, Suspend, Hibernation
BIOS	Award, Plug & Play, 256kb
Disk Drives	HDD (Exchangeable), 2.5", 12.7 & 17mm height CD-ROM or DVD-ROM (exchangeable)
SmartBay	FDD (1.44MB) / Zip (100MB) / LS-120 (120MB) / 2nd HDD / 2nd Battery
Keyboard	19 mm Pitch
Sound	ESS Maestro-2 (1968)
I/O ports	NS 97338 controller Serial, Parallel, IrDA, CRT, Game, PS/2, 3 Audio jacks, 2 USB, Docking/Port connector, 2 Video Jack (Video in/out)
PCMCIA	Type II x 2 or Type II x1 and Type III x 1 PCMCIA Card bus Controller, O2 Micro

Power	Adapter 50W (min.) AC 100-240 V
Options	FaxModem (56kbps) Car Adapter Quick Charger Docking Station (1 PCI slot, Hot docking, SmartBay)
Dimension	316x259x55.5mm (W x D x H) 12.1"/13.3"/14.1" 324x273x54mm (W x D x H) 15.0" 3.4 kg with 12.1" TFT, Li-Ion, CD-ROM and FDD

Appendix C Faxmodem installation

Hardware installation

Open the palmrest as described in Chapter 4.4. On your left side is an empty space for the faxmodem card.



- Make sure that the notebook is turned off and remove battery and power cord.
- Insert the faxmodem with the connector facing the connector in the notebook.
- Attach the metal cover as seen in the picture
- Close the palmrest and reinsert battery and power cords.
- When you need to use the Faxmodem, attach the Faxmodem cable to the notebook's faxmodem connector and the other side with the phone jack to the wall.

Software installation (Win 95 and 98 are same)

1. Press “Del” during POST to enter CMOS setup.
2. Move right/left arrow key to ”INTEGRATED PERIPHERALS” then press Enter
3. Move up/down arrow key to “UART2 Mode”
4. Press PgUp/PgDn key until “Modem” selection show up .
5. Press “ESC” to exit “INTEGRATED PERIPHERALS”.
6. Move down arrow key to “SAVE & EXIT SETUP” then press Enter.
7. Start Windows95/98, Windows95/98 will report that a new hardware is found
8. Click Next-> Finish for Windows 95/98 first detect internal fax/modem.
9. Point to Start -> Settings -> Control Panel -> Add New Hardware
10. Click “Next” then select NO for not search hardware by Window.

11. Click “Next” -> double click Modem.
12. Check “Don’t detect my modem, I will select it from a list”.
13. Click Next -> Have Disk
14. Insert utility CD title into CD-ROM (suppose D is CD-ROM drive)
15. Type “D:\WIN95\MODEM” for “Copy manufacturer’s files from” then click “Next”
16. Select “Communication Port (COM2) then click “Next”
17. Change utility CD title to Windows 95/98 CD then point to D:\WIN95 (D:\WIN98)
18. Click “Next” for “Wave Device for voice Modem” then click “Finish”.
19. Type the correct country code and area code for “location information”.
20. Click Next -> Finish then reboot Windows95/98
21. Point Start -> Settings -> Control Panel -> System -> Device Manager -> Modem.
22. Remove the correct 56M modem.
23. Select the yellow exclamation mark 56M modem -> Driver -> Update Driver.
24. Select “ No, select driver from list” then click “Next”.
25. Select “Modem” then click ”Next”.
26. Select “56K Modem” then click “Finish” to complete fax/modem installation.

The fax/modem is now enabled by the notebook computer and is ready to be used in other applications. To install the fax/modem in other applications refer to the manual for those programs, when they ask for which modem, then choose the "56K Modem" as above.

Caution: Always disconnect the faxmodem board (the one that is described above) from the telephone system when installing or when the palmrest is in open position.

Attention: Toujours debrancher la ligne telephonique de la carte modem (munie d'une prise ou d'une fiche) avant de proceder a l'installation dans l'appareil ou lorsque le couvercle de celui-ci est retire.

Appendix D CPU upgrade

Your notebook supports Intels latest CPU technology, the MMO (Mobile MOdule). This makes it very easy for your dealer to exchange the CPU for you. There are two types of MMO modules from Intel, your notebook is using the latest MMC-2 400-pin connector.

This manual doesn't mention how to make this change since this should be done by your dealer, or the manufacturer of your notebook.

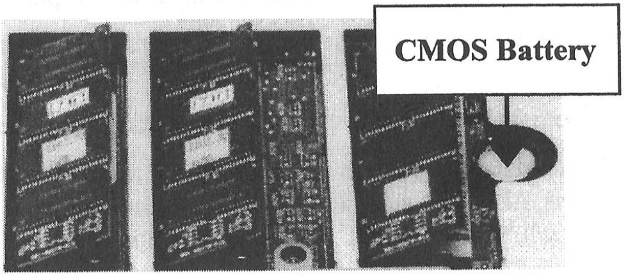
Warning:	We don't recommend you to upgrade the CPU by yourself, please consult your dealer or another authorized service center for notebooks. The connector on the MMO is very sensitive, if handled improperly the connector might break and thus making the MMO useless.

Appendix E Memory upgrade

Your notebook can easily be expanded with more memory, a maximum 384MB can be fitted.

When you want to upgrade memory open the palmrest as seen in Chapter 4.4, then lift the keyboard carefully without scratching the very fragile LCD. Also the notebook must be turned off.

You will now see three memory slots as in the picture:



When you bought the notebook one or two of the slots might have memory modules already. To upgrade the memory, see the table below:

Some RAM combinations:

	Left	Middle	Right
32MB	0	0	32
	32	0	0
64MB	64	0	0
	32	32	0
128MB	64	64	0
	64	32	32
192MB	64	64	64
256MB	0	128	128
384MB	128	128	128

Note:

Don't mix EDO and SDRAM memory modules.

RAM modules can be put in any slot.

Only 3.3V modules are supported.

Appendix F Difficult Words

APM	Advanced Power Management, an operating and application level of power management, your notebook is fully compatible to this.
BIOS	Basic Input Output System. In the manual we refer the BIOS as Setup. To modify the BIOS settings press F2 when you start your notebook, for more information see Appendix A.
BIT	A binary digit, the smallest unit used in a computer, it takes 8 bits to make a byte.
BOOT	To load a program or operating system into the memory.
BUS	Electrical circuit within the system, used to transmit data from one device to another. Your notebook uses both ISA and PCI buses, the PCI bus is much faster (VGA, PCMCIA and IDE)
BYTE	8 bits
CACHE	Very fast kind of memory, your CPU has got 32kb of Level 1 cache. There is also Level 2 cache of 512kb.
CARDBUS	The bus for your PCMCIA cards.
CMOS	A special low power memory, this is kept even if you turn off the notebook, the BIOS code is saved here.
CPU	See Appendix D for detailed information. Your CPU has got a number indicating the speed in MHz (Million Hertz), the higher the faster.
CRT	Cathode Ray Tube. Another name is external monitor.
DMA	Direct Memory Access.
DOS	Disk Operating System
DRAM	Dynamic Random Access Memory

DSTN	Dualscan Twist Neu-matic. This kind of LCD is not as fast as TFT, if you want to watch a movie clip we recommend TFT or CRT. Also known as passive color.
ECP	Extended Capabilities Port
EPP	Enhanced Parallel Port, much faster than the standard Parallel port, but to be able to use it your device must be compatible.
FDD	Floppy Diskette Drive. The storage of a standard diskette is 720kb, 1.2MB (Japan only) and 1.44MB. Also see LS-120 and ZIP for new diskette types.
FORMAT	Preparing a diskette (floppy or HDD) for use with a DOS, this erases all the information.
HDD	Hard Disk Drive. This is the main storage device in your notebook, the access to the HDD is much faster than CD, FDD, ZIP, LS-120 and other devices. You can change hard disk quite easily by buying a harddisk storage module, see Chapter 4.
IDE	Integrated (or Intelligent) Drive Electronics. Your HDD, CD, DVD, LS-120, ZIP and are all IDE devices.
I/O	Input/Output
IRQ	Interrupt Request, every device has got an IRQ number, if two devices share the same number there will be a conflict and none of the devices will work.
ISA	A standard for 8 and 16-bit expansion cards, this standard is also referred as AT-bus. The speed on the bus is 8MHz.
kB	Kilo Byte (1024 bytes)
LAN	Local Area Network. There are many different standards for LAN, ETHERNET, Token ring, etc...
LBA	Enabling LBA causes Logical Block Addressing to be used in place of cylinders, heads and sectors, this can be done in the BIOS, see Appendix A.

LCD	Liquid Crystal Display. A common name for your notebook's screen. There are two types, DSTN and TFT.
MB	Mega Byte (1 million bytes).
MMO	Mobile Module, a CPU module made by Intel. On this module you will find the CPU, 2nd level cache, 430TX or 440BX NorthBridge and a voltage regulator plus some other components. Your notebook is compatible to all MMO with MMC-1 connector (280-pin).
MMX	Multi Media eXtensions, this consists of 57 new instructions in your CPU. MMX speeds up multimedia programs specially written for MMX capable CPU's. MMX was invented by Intel.
Mouse	A pointing device to move your cursor under certain software, like Windows 95.
OS	Operating System, there are many different, like: MS-DOS, Windows 95, Windows NT, OS/2, UNIX, etc...
PARTITION	A logical unit created on the HDD, which is seen to the OS as a separate drive.
PCI	Peripheral Connect Interface, this is the successor of ISA bus, it provides a much faster speed than ISA. The speed on the bus is 33Mhz.
PCMCIA	Personal Computer Memory Card International Association, Small card in credit card size that can contain; memory, Fax/modem, SCSI adapter, LAN adapter, Video capture, etc...
PIXEL	Image elements (small points), that compose a screen image.
POST	Power-On-Self-Test, every-time you power on the notebook it is doing many different tests.
RAM	Random Access Memory
ROM	Read Only Memory. This memory contains the BIOS where all information about your notebook is stored
SPP	Standard Parallel Port

SVGA	800x600 pixels resolution, also see VGA and XGA.
TFT	Thin Film Transistor. The best kind of color LCD. Also called active color. The speed and brightness is much better than DSTN.
TouchPad	A pointing device to move your cursor under certain software, like Windows 95.
UART	Universal Asynchronous Receiver/Transmitter, the UART is compatible to NS16550.
VGA	Video Graphics Array. A standard for 640x480 resolution, also see SVGA and XGA.
XGA	1024x768 pixels resolution, also see VGA and SVGA.
ZV-port	Zoomed-Video port, this is a kind of PCMCIA cards that are much faster than standard PCMCIA cards, your notebook is fully compliant. The ZV-port is located on the Cardbus.

Appendix G Error report

Tested System name: ______________ S/N: ________________ Date:____-___-___

CPU:	☐ Pentium II Speed:______MHz	☐ 266MHz	☐ 300MHz	☐ 333MHz	
Memory:	☐ 32MB	☐ 64MB	☐ 128MB	☐ _____MB	
Display:	☐ TFT	☐ CRT	☐ TV	☐ LCD+CRT	
HDD:	_______ MB	Manufacturer: _________		☐ Model ______________	
Revisions:	BIOS ______	VGA ______	PCMCIA __	☐ Utility ____	☐ ____________
OS:	☐ DOS ____	☐ Win 95	☐ Win 98	☐ Win NT	☐ ____________

Peripherals attached:

SmartBay:	☐ FDD	☐ LS-120	☐ ZIP	☐ 2nd HDD
CD-bay:	☐ CD	☐ DVD	Speed: ___x	Maker: ______________

☐ Docking station (please attach faulty report) ☐ ____________________

PCMCIA card:

☐ PCMCIA card Name: ____________________ Revision: ____ IRQ___ DMA___

☐ PCMCIA card Name: ____________________ Revision: ____ IRQ___ DMA___

Software where problem occurs:

Name: ____________________ Rev.: ______ Error message: ______________

If you have any problems with your notebook, especially with software or hardware compatibility we would like to know this so we can maintain a 100% compatibility. Therefore if you find any problem please fill-out this report and give to your dealer.

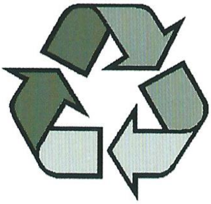
If you have tried many different settings or configurations, like IRQ, DMA, LCD or CRT, mark all of them so that we easily can repeat the problem under the same configuration(s).

If you are using the dockingstation, please fill-out the Faulty report in the Docking station User's manual as well.

Attach another page with detail description of your problem or use the backside.

Your cooperation is most appreciated!

Problem description:



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